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January 22, 2002

BY HAND

Magalie Roman Salas, Esquire
Secretary
Federal Communications Commission
The Portals
445 12th Street, SW, Room TWB204
Washington, D.C. 20554

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JAN 22 2002

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: WT Docket No. 01-319
Comments of Cornell University

Dear Ms. Salas:

On behalf of Cornell University, enclosed please find an original and four copies of Comments in response to the Commission's November 21, 2001 Notice of Proposed Rulemaking in the above captioned docket. Please contact me if you have any questions regarding this matter.

Sincerely,

Paul J. Feldman
Counsel for Cornell University

PJF:ltp

Enclosure

cc: Patricia McClary, Esquire (w/encl.)
Katherine M. Harris, Room 4-C236 (by hand)
Qualex International, Room CY-B402 (by hand)

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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JAN 22 2002
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Review of Quiet Zones	)	WT Docket 01-319
Application Procedures	)	

COMMENTS OF CORNELL UNIVERSITY

Cornell University hereby submits its comments in response to the Commission's November 21, 2001 Notice of Proposed Rulemaking in the above-captioned docket ("NPRM"). In these Comments, Cornell supports certain proposals for improvement of coordination between wireless operators and Quiet Zone entities, to encourage early coordination, while protecting the current procedural rights of Quiet Zone entities where early coordination is not performed.

I. Introduction

Cornell has a substantial interest in this proceeding, as it operates the Arecibo Observatory ("Arecibo" or "Observatory") in Arecibo, Puerto Rico. Arecibo is part of the National Astronomy and Ionosphere Center ("NAIC"), a national research center operated under a cooperative agreement with the National Science Foundation ("NSF"). The NSF is an independent federal agency whose aim is to promote scientific and engineering progress in the U.S. Additional funding for Arecibo is provided by the National Aeronautics and Space Administration ("NASA").

As the site of the world's largest single-dish radio telescope, Arecibo is recognized as one of the most important centers in the world for research in radio

astronomy and planetary radar. Arecibo has been operating since 1963, and in 1997 work was completed on a multi-million dollar upgrade of the facilities, which significantly expanded the range and sensitivity of the observations that could be made, while increasing the shielding around the telescope in an attempt to reduce interference from ground radiation. The telescope now operates up to 10 GHz.

Arecibo has a long history of being the site where very significant accomplishments in astronomy have occurred, including:

-the first discovery of planets outside of our own solar system;

-discovery of the first pulsar in a binary system, leading to important confirmation of Einstein's theory of gravitational waves and a Nobel Prize for two radio astronomers who performed their research at Arecibo; and

-discovery of the correct rotation rate of the planet Mercury, as well as the discovery of ice in craters on Mercury's polar regions (and similar investigation of the polar regions of the Earth's Moon).

Yet, as the Commission knows, this uniquely important and expensive scientific instrument is extremely vulnerable to interference from unwanted emissions. *See, e.g.*, Radio Astronomy Coordination Zone in Puerto Rico, Report and Order, 12 FCC Rcd 16522 (1997). It is for this very reason that the Commission has enacted Quiet Zone rules specifically protecting Arecibo, and making Arecibo a Quiet Zone Entity ("QZE"). *See* Section 1.924(d) of the Commission's Rules.

II. The Importance of and Administration of Arecibo Quiet Zone Protections

Cornell is pleased that the Commission has stated that in issuing the NPRM in this proceeding, it is "not proposing to reduce or eliminate carrier requirements to coordinate with Quiet Zones." NPRM at para. 5. As one of the QZEs, Cornell strongly

agrees with the Commission's statement that protection of the Quiet Zone areas from interference is "critically important." *Id.* Indeed, the Puerto Rico Coordination Zone (the rules for which were subsequently placed in the current Section 1.924(d)) was enacted in part because of the negative impact of local transmitters on observations at Arecibo. For example, very damaging interference was caused when a television station was constructed with a transmitter in line of sight to Arecibo, and on a channel whose first harmonic was in the 1,400-1,427 MHz Radio Astronomy Service band. Similarly, coordination with the local National Guard has ameliorated harmful interference to the Observatory from National Guard radar operations.

As a result of the enactment of the Quiet Zone rules, few entities have as much experience in the administration of those rules as Arecibo. The Observatory receives on average one application every two days. These applications are handled by a person specifically designated as the Observatory's spectrum manager. Even with the significant amount of work associated with reviewing applications (one application had 148 sites to analyze), the Observatory typically completes review of a proposal within one week. In addition, the Observatory receives mail, fax and telephone inquiries prior to the drafting of applications. The Observatory gladly addresses these informal inquiries, as the information provided by the Observatory has in many cases prevented the drafting of applications (and the purchase and construction of facilities) that would cause harmful interference to Observatory operations, and which would likely have been denied by the Wireless Telecommunications Bureau if filed.

In sum, Cornell believes that the Quiet Zone rules work efficiently and effectively to protect QZEs, while placing little burden on applicants for wireless services. Thus,

while Cornell is willing to support certain rules that promote even greater efficiency in the coordination process, the Commission should act in a manner consistent with its long standing recognition of the substantial public interest benefits in protecting the Observatory from harmful interference.

III. Cornell Supports Certain Proposals for Improvement of Coordination Procedures.

Cornell agrees with the Commission's statement that current Quiet Zone coordination procedures have generally been successful. NPRM at para. 5. While Cornell does not believe that the current procedures impose unnecessary burdens on wireless operators, Cornell supports changes to the current procedures that will increase the efficiency of the coordination and application process for all parties, as long as there is no reduction in the procedural protection of radio astronomy facilities.

Arecibo has learned from its extensive experience that the earlier that a wireless operator and an effected QZE begin the coordination process, the better the result will be for all parties. As noted above, early "informal" coordination has in many cases allows the wireless operator to better understand the requirements of Arecibo, so that the operator can design its system appropriately before it has invested in equipment and entered into agreements with customers that are based on facilities that would cause harmful interference to the Observatory. Similarly, early coordination allows the QZE additional time to properly analyze a proposal, and provide detailed guidance to the operator. The result is an application to the FCC that is more likely to be granted without objection from the QZE. This reduces the application processing burden on the Commission. Accordingly, Cornell supports the proposal in paragraph 10 of the NPRM

to allow parties to provide notification to and begin coordination with Quiet Zone entities in advance of filing an application with the Commission.

Paragraphs 8 and 9 of the NPRM address proposals for expedited processing of applications with QZE consent, and conditional operation by applicants for Part 101 facilities prior to grant of the application by the Commission. Cornell supports the following regime, which is intended to encourage early coordination, while protecting the current procedural rights of the QZE where early coordination is not performed:

> -If the wireless operator performs early coordination with the QZE, and the operator files its application with the written consent of the QZE attached, then the Commission should be free to expedite the processing of the application, without regard to the mandated 20 day waiting period for comments or objections from the QZE.[1]
>
> -Similarly, applicants for Part 101 facilities who have performed early coordination and attached the written consent of the QZE to their application should be allowed to operate facilities in a Quiet Zone on a conditional basis, pending the Commission's processing of the application.
>
> -In all other cases, the current Quiet Zone procedures and rules should apply, *i.e.*, the Commission should forbear from processing the application for the mandated 20 day period, and Part 101 applicants should not commence conditional operations in Quiet Zones.

In paragraph 11 of the NPRM, the Commission seeks comments on rules that cross-reference Quiet Zone requirements in Section 1.924. Cornell believes that such

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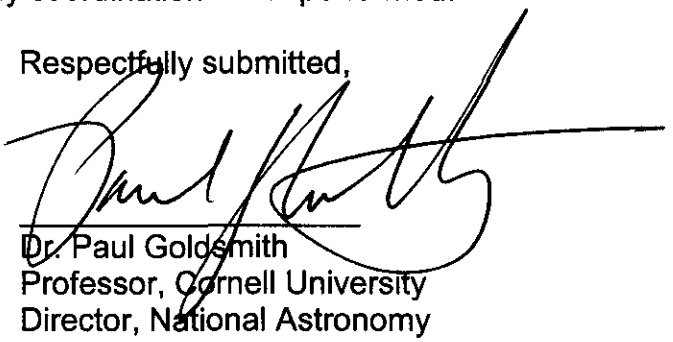
[1] The written consent of the QZE should contain reference to the parameters of the wireless operation consented to, so that the Commission can compare those parameters with the parameters sought in the application. If the parameters are different in any way, then the grant of consent is void, and the Commission should not only follow the mandated 20 day waiting period, but it should either return the application without processing, or should alert the QZE, so that the QZE knows that it should review the application and provide comments or objection where appropriate to the Commission. Even where the wireless operator attaches written consent, it should still be required to serve a copy of the application on the affected QZE.

rules should not be eliminated. Such rules provide important notice to applicants who might not otherwise read Section 1.924, and thus might not otherwise be aware of the need to comply with Quiet Zone regulations. It is Cornell's experience that many times per year, applications are filed without fulfilling the Quiet Zone requirements, because the applicant is not familiar with the existence of those requirements. Similarly, Cornell supports the continued reference to Quiet Zone coordination requirements in all rule Parts that apply to wireless area-specific licenses (*e.g.*, licenses for "basic trading areas" or metropolitan statistical areas) rather than to site-specific licenses. Lastly, Cornell requests that the Commission clarify the rules to specify who is responsible for contacting the QZE: the applicant, or the applicant's frequency coordinator. While the frequency coordinator may be better qualified to perform this task, the matter should be clarified in any case.

IV. Conclusion

Early coordination between a wireless applicant and a QZE promotes the best results for both parties and the Commission. Accordingly, Cornell supports certain proposals described above to encourage early coordination, while protecting the current procedural rights of the QZE where early coordination is not performed.

Respectfully submitted,



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January 22, 2002